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S.N. 787,692

Art Unit 212  
10/15/85

Before the Board of Appeals

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MAILED

JUN 17 1988

GROUP 210

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BOARD OF PATENT APPEALS  
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OLE K. NILSSEN

FOR  
APPELLANT

Examiner's Answer

MAILED

JUN 17 1988

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GROUP 210

Serial No. 787,682

Art Unit 212

Examiner's Answer

This appeal involves claims 143 and 144.

Claims 139 to 142 are allowed.

Appellant's brief presents arguments relating to the fee. As in Paper No. 53 page 2, top paragraph, appellant is advised to address a "Request for Refund", Refund Section, Finance Branch, Patent and Trademark Office for action on his request.

A correct copy of appealed claims 143 and 144 follows page 4 of the brief.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Appellant has not separately argued the patentability of claim 144 under 35 USC 103. Accordingly, this claim will stand or fall with the patentability of claim 143.

The prior art of record relied on is:

4,071,812	Walker	1-1978
3,026,486	Pintell	3-1962

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The invention is drawn to a highly efficient inverter power supply for use with a fluorescent lamp.

The prior art relied upon in this appeal is described in the grounds of rejection.

#### GROUND'S OF REJECTION

Claims 143 and 144 are rejected under 35 U.S.C. 103 as being unpatentable over Walker in view of Pintell.

Walker discloses a DC source 10, a square wave oscillator inverter 12, and a series resonant circuit LC connected to the output of square wave oscillator 12. Col. 2, lines 57 and 58 teach that the source of direct current power 10 may be a rectifier. A lamp load 20 is connected in parallel with capacitor C to receive a sinusoidal voltage developed by capacitor C. Thus Walker discloses the old combination of a rectifier, a self-oscillating inverter, and LC circuit and a lamp load.

The claims differ from Walker by calling for a specific highly efficient, self-oscillating inverter having saturable inductor means associated with the LC circuit in the feedback path.

Pintell in figure 6 discloses a self-oscillating inverter of the type claimed. The inverter includes first and second transistors 616', 616", LC series circuit 616, 617, and feedback means 620, 621, 622' and 622", including a saturable inductor means 620 to co-determine the frequency of the inverter.

A load L is connected in series with the LC circuit 616 and 617, thereby drawing a sinusoidal current

through it. Where the load  $L$  is linear, a sinusoidal voltage will also appear across load terminals defined by the right hand side of inductor 617 and the top of primary winding 621. Column 1 lines 31-44 of Pintell suggests that the various inverter embodiments for generating sinusoidal waves are highly efficient (close to 100% efficiency, col. 1, lines 43 and 44).

Thus it would have been obvious to use Pintell's inverter of figure 6 in the generally disclosed square wave oscillator configuration shown on the front page of Walker. And where a sinusoidal load voltage was required, as for a fluorescent lamp, it would have been obvious to connect the lamp across capacitor C as in Walker. Where a sinusoidal current was desired through the load, it would have been obvious to connect it as in Pintell. This is the kind of design choice expected of one skilled in the art. Since both of these load connections were well known, and their choice was routine, the claimed subject matter viewed as a whole would have been obvious.

Alternatively, the claims would have been obvious over Pintell in view of Walker.

Except for the claimed rectifier means serving as a DC source and the load connected across the series resonant capacitor to develop a sinusoidal voltage there-across, the claims are anticipated by Figure 6 of Pintell.

But Walker teaches using a rectifier for a DC source. Thus this provision is an obvious provision.

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And whether a load in combination with a series resonant circuit requires a sinusoidal current or a sinusoidal voltage is determined by the peculiarities of the load itself. As for the general proposition of placing a load in series with the LC circuit to derive a sinusoidal load current, as shown by Pintell, or in parallel with the capacitor of the LC circuit to device a sinusoidal AC voltage, as shown by Walker, this would have been obvious to one skilled in the art having both references before him and having a knowledge of basic electronic circuits. Where, as here, a sinusoidal load voltage was required for a lamp, it would have been obvious to place load L of Pintell in parallel rather than in series with capacitor 616, as suggested by Walker.

## REBUTTAL

As to point (a) on page 3 of the brief, attention is invited to the appellant's specification, page 3, top paragraph, citing the need for reliable and highly efficient inverter circuits which can be employed to provide high voltage outputs suitable for energizing discharge lamps. But this need for high efficiency and the solution to this need using an inverter of the type claimed is an old need that has been solved by Pintell's inverters having close the 100% efficiency. This is the advantage of using Pintel's inverter arrangement.

As to point (b) on page 4 of the brief it is suggested that one skilled in the art has sufficient

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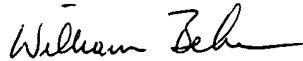
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mental capacity to properly connect a specific load to an LC circuit. Where the load is a fluorescent lamp, as in appellant's specification, one skilled in the art would have connected it across capacitor 616 of Pintell as taught by Walker.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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703/557-5052

6/14/88

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